## From the May 2008 Issue of Ethanol Producer Magazine CleanTech Biofuels, Merrick to develop MSW-to-ethanol project by Bryan Sims

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St. Louis, Mo.-based CleanTech Biofuels Inc. along with their engineering firm, Denver-based Merrick & Co., are building a demonstration municipal solid waste to ethanol facility at Hazen Research Inc.'s eight-acre research facility in Golden, Colo. CleanTech and Merrick will operate the facility.

According to Clean Tech Chief Executive Officer Ed Hennessey, the initial phase of the project includes testing the viability of the company's novel HFTA biomass conversion technology in combination with its Pressurized Steam Classification (PSC) conversion technology utilizing MSW as feedstock for conversion to fuel grade ethanol.

To accomplish this, CleanTech recently purchased a reactor system from the Forest Products Lab at the University of California at Berkeley in late January. Hennessey said the reactor system has successfully demonstrated the effectiveness of CleanTech's HFTA cellulose conversion technology on wood waste feedstocks at Berkeley. Reassembled at Hazen's research site, CleanTech is currently utilizing the reactor system in the first developmental phase of the project to optimize reaction conditions on what CleanTech calls process engineered fuel - or cellulosic biomass from municipal solid waste. CleanTech plans on including other cellulosic feedstocks into the process such as corn stover, wood waste and switchgrass, but MSW is its primary niche feedstock.

"The purpose of the pilot project is to demonstrate the viability of the technologies and to get the operating data and to be able to forecast capital costs for a larger commercial plant once we've demonstrated it on a smaller scale," Hennessey said.

Once initial tests have been conducted with successful results, CleanTech and Merrick and Co. will utilize Hazen's energy research and development expertise to build the demonstration facility on Hazen's research site. Hazen will maintain all permits, licenses and other approvals necessary to complete the project.

"We hope to be under construction on the demonstration plant by around August this summer," Hennessey said.

Once operational, the facility is projected to produce approximately 36,000 gallons of cellulosic ethanol per year from four tons of municipal solid waste per day, according to Hennessey.

For more information on CleanTech Biofuels visit<u>www.cleantechbiofuels.net/</u> <a href="http://www.cleantechbiofuels.net/">http://www.cleantechbiofuels.net/</a>.

For more information on Merrick & Co. visit www.merrick.com <a href="http://www.merrick.com">www.merrick.com</a>>.

For more information on Hazen Research visit <a href="www.hazenusa.com/index.php">www.hazenusa.com/index.php</a> <a href="http://www.hazenusa.com/index.php">http://www.hazenusa.com/index.php</a>.

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